AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of claims:

1. (previously presented) A method for preparing an electrically conductive polymeric material, comprising

a) contacting a polymeric material with a viologen salt to form a pre-doped composition, wherein said polymeric material is capable of exhibiting electrical conductivity upon oxidative doping; and

b) irradiating the pre-doped composition with electromagnetic radiation, thus producing an electrically conductive polymeric material.

2. (original) The method according to claim 1, wherein the electromagnetic radiation is of one or more UV or near UV wavelengths.

3. (original) The method according to claim 1 or 2, wherein the viologen salt is deposited on a suitable substrate.

4. (previously presented) The method according to claim 3, wherein the viologen salt is grafted onto a suitable substrate utilizing a heat and/or UV-induced treatment to form a viologen

salt-bearing substrate.

5. (previously presented) The method according to claim 3, wherein the viologen salt is formed in situ in contact with the polymeric material.

6. (previously presented) The method according to claim 3, wherein a surface of the viologen salt-bearing substrate is partially or completely coated with the polymeric material.

7. (previously presented) The method according to claim 1 wherein the polymeric material is contacted with the viologen salt by mixing the polymeric material and the viologen salt prior to forming a coating or film of the mixture.

8. (previously presented) The method according to claim 1 wherein a coating of the polymeric material is deposited on a suitable substrate to form a polymer-coated substrate.

9. (previously presented) The method according to claim 8, wherein the viologen salt is deposited on the polymer-coated substrate to form a substrate coated with polymer and viologen salt.

10. (original) The method according to claim 1, wherein a mixture of viologen salts is used.

11. (previously presented) The method according to claim 1 wherein at least one of the 1,1'-substituents of the viologen salt are independently selected from an alkyl group or a benzyl group.

12. (original) The method according to claim 1 wherein the viologen salt is a polymeric viologen salt.

13. (previously presented) The method according to claim 12, wherein the viologen salt moiety is present in the backbone of the polymeric viologen salt.

14. (previously presented) The method according to claim 12, wherein the viologen salt moiety is present as a side chain of the polymeric viologen salt.

15. (original) The method according to claim 1, wherein the viologen salt is a viologen dihalide.

16. (original) The method according to claim 13, wherein the viologen salt is a viologen dihalide.

17. (original) The method according to claim 1 or 2 wherein the polymeric material is polyaniline, a polyaniline derivative, polypyrrole, a polypyrrole derivative or a mixture of at least two compounds selected from the group consisting of a polyaniline, a polyaniline derivative, a polypyrrole and a polypyrrole derivative.

18. (original) The method according to claim 1 wherein the resistance of the polymeric material is reduced by approximately 3 to 6 orders of magnitude within a period of 3 hours or less.

19. (original) The method according to claim 1, wherein the method is conducted at a temperature of 0°C to approximately 80°C in the presence of air and in the absence of any solvent.

20-33. (canceled)

34. (previously presented) The method according to claim 9 wherein the substrate coated with polymer and viologen salt is formed by a method comprising:

a) providing a low density polyethylene film substrate; a solution of aniline or pyrrole; ammonium persulfate; a vinyl alkyl halide or vinyl benzyl halide; an alkyl halide; and 4,4'-bipyridine;

b) immersing the polyethylene film substrate into the solution of aniline or pyrrole and ammonium persulfate for a period sufficient to form a polymeric coating on the substrate;

c) contacting the coated substrate with the vinyl alkyl halide or vinyl benzyl halide;

d) subjecting the mixture to UV or near UV irradiation for a time sufficient to form a vinyl alkyl halide or vinyl benzyl halide grafted substrate; and

e) forming the viologen on the vinyl alkyl halide or vinyl benzyl halide grafted substrate via reaction with 4,4′ bipyridine and an alkyl halide.

35. (previously presented) A method according to claim 4 wherein the viologen-salt bearing substrate is made by a method comprising:

i) providing a vinyl alkyl halide grafted low density polyethylene film substrate;

an alkyl halide; and

4,4′-bipyridine;

ii) contacting the grafted film substrate with the 4,4′-bipyridine for a time sufficient to permit reaction therebetween forming a modified grafted film substrate;

iii) subsequently contacting the modified grafted film substrate with the alkyl halide for a time sufficient to permit the formation of a viologen-salt grafted film.

36. (previously presented) A method for preparing an electrically conductive polymeric material comprising:

a) providing a vinyl benzyl halide grafted film substrate;

b) reacting the vinyl benzyl halide grafted film with an equimolar mixture of 4,4' bipyridine and p-xylene dihalide to form a viologen salt-grafted film;

c) coating the viologen salt-grafted film with polyaniline to form a polyaniline-coated film; and

d) exposing the polyaniline-coated film to near-ultraviolet radiation to obtain an electrically conductive polymer.

37. (new) The method of claim 1, in which the viologen salt is formed *in situ* on a substrate and then contacted with the polymeric material.

38. (new) The method of claim 1, in which the viologen salt is formed *in situ* on a substrate to obtain a viologen-salt coated substrate and then the polymeric material is formed *in situ* on the viologen-salt coated substrate.